

1           1.    A method comprising:  
2                receiving a request from an operating system for  
3   file data; and  
4                accessing a semiconductor memory storing  
5   compressed file data.

1           2.    The method of claim 1 further including  
2   decompressing said compressed file data.

1           3.    The method of claim 2 including using a device  
2   driver to format the decompressed data in a format  
3   compatible with a file system utilized by said operating  
4   system.

1           4.    The method of claim 3 including storing the  
2   decompressed data in a buffer for use by a file system  
3   driver.

1           5.    The method of claim 1 including forming a file  
2   system image of blocks of data of substantially equal size.

1           6.    The method of claim 5 including compressing each  
2   of said blocks to form a compressed file system image  
3   formed of blocks of unequal size.

1           7.    The method of claim 6 including affixing a header  
2   to said file system image which provides information about  
3   how to locate each block.

1           8.    The method of claim 7 including providing in said  
2   header information about the number of entries in an  
3   allocation table and providing in said allocation table  
4   information about the length of each of said compressed  
5   blocks in said file system image.

1           9.    The method of claim 1 including accessing an  
2   operating system stored in said semiconductor memory.

1           10.   An article comprising a medium storing  
2   instructions that cause a processor-based system to:  
3                receive a request from an operating system for  
4   file data; and  
5                access a semiconductor memory storing compressed  
6   file data.

1           11.   The article of claim 10 further storing  
2   instructions that cause a processor-based system to  
3   decompress said compressed file data.

1           12.   The article of claim 11 further storing  
2   instructions that cause a processor-based system to use a

3 device driver to format the de-compressed data in a format  
4 compatible with a file system utilized by said operating  
5 system.

1 13. The article of claim 12 further storing  
2 instructions that cause a processor-based system to store  
3 the de-compressed data in a buffer for use by a file system  
4 driver.

1 14. The article of claim 10 further storing instruc-  
2 tions that cause a processor-based system to form a file  
3 system image of blocks of data of substantially equal size.

1 15. The article of claim 14 further storing  
2 instructions that cause a processor-based system to  
3 compress each of said blocks to form a compressed file  
4 system image formed of blocks of unequal size.

1 16. The article of claim 15 further storing  
2 instructions that cause a processor-based system to affix a  
3 header to said file system image which provides information  
4 about how to locate each block.

1 17. The article of claim 16 further storing  
2 instructions that cause a processor-based system to provide  
3 in a header a block allocation table including information

4 about the length of each of said compressed blocks in said  
5 file system image.

1 18. The article of claim 17 further storing  
2 instructions that cause a processor-based system to provide  
3 in said header information about the number of entries in  
4 said allocation table.

1 19. The article of claim 10 further storing  
2 instructions that cause a processor-based system to access  
3 an operating system stored in said semiconductor memory.

1 20. A system comprising:  
2 a processor; and  
3 a re-programmable semiconductor memory coupled to  
4 said processor, said memory storing a compressed operating  
5 system and compressed file data for said operating system.

1 21. The system of claim 20 wherein said memory is a  
2 flash memory.

1 22. The system of claim 21 including a basic  
2 input/output system stored in a compressed format on said  
3 memory.

1           23. The system of claim 22 including, stored on said  
2 memory, a primary operating system and a backup operating  
3 system for use when the primary operating system fails to  
4 needs updating.

1           24. The system of claim 20 including a device driver  
2 which decompresses said compressed data in said memory and  
3 provides said data in a format used by the operating system.

1           25. The system of claim 24 including a file system  
2 driver which organizes the data received from said device  
3 driver into a file system.

1           26. The system of claim 20 wherein said semiconductor  
2 memory stores an allocation table which indicates the  
3 length of entries stored in said memory and the number of  
4 entries in said allocation table.

1           27. The system of claim 20 wherein said file system  
2 data stored in compressed form on said semiconductor memory  
3 is formed into compressed blocks of unequal length.

1           28. The system of claim 20 including data for more  
2 than one file system stored on said semiconductor memory.

1           29. The system of claim 27 including a loader and a  
2 kernel for an operating system stored on said memory.

1           30. The system of claim 20 including a network  
2 connection to download additional data from said network.